

# EGIGATEK STM8670 Brief

( CSR8670 based Bluetooth 4.0 flash type stereo Module )

## 1. Description

STM8670 BT4.0 flash type stereo module is a consumer audio solution for wireless applications, such as stereo soundbar, speaker, headphone or other sound product. It can be connected with any bluetooth devices in an operating range. It is slim and light so the designers can have better flexibilities for the product shapes.

STM8670 supports HSP, HFP, A2DP, AVRCP, PBAP, MAP, SPP and TWS...etc. profiles. It integrates an ultralow-power DSP and application processor with embedded flash memory, a high performance stereo codec, a power management subsystem, LED and LCD drivers and capacitive touch sensor inputs in a SOC IC. The dual-core architect with flash memory enables manufactures to easily differentiate their products with new features without extending development cycles. It integrates RF Baseband controller, antenna,... etc. and provide UART interface, programmable I/O, stereo speaker output, microphone input,... etc.

## 2. Features

- Small overall dimension (19mm x 15mm x 2.3mm)
- Bluetooth Specification V4.0(Dual Mode)
- Class 1, Class 2 and Class 3 support
- Physical connection as SMD type
- 80MHz RISC MCU and 80MIPS Kalimba DSP
- 16Mb internal flash memory(64-bit wide,45ns);optional support for 64Mb of external SPI flash
- Stereo codec with 2 channels ADC and up to 6 microphone inputs(include bias generators and digital microphone support)
- Support for CSR's latest CVC technology for narrow-band and wideband voice connections including wind noise reduction
- Music Enhancements: SBC, MP3, AAC and AAC+, Faststream codec, atpX, 5-band EQ, 3D stereo separation and so on

- Audio Interfaces: I2S, PCM and SPDIF
- Serial Interfaces: UART, USB 2.0, I2C and SPI
- Support HSP, HFP, A2DP, AVRCP, PBAP, MAP, SPP, iAP profile
- Multipoint support for HFP connection to 2 handsets for voice
- Multipoint support for A2DP connection to 2 A2DP source for music playback
- 3 Hardware LED controllers (for RGB) and ability to drive LCD segment display directly
- Support for up to 6 capacitive touch sensor inputs
- Built-in RF combo filter, Integrated 26M Crystal
- No radio signal interference, support for 802.11 co-existence
- Stamp Surface Mount type

\*\*\* Some features are optional for customization on demand.

### 3. Application

- TVs
- Smart remote controllers
- Wired or wireless soundbars
- Wired or wireless speakers and headphones
- Wearable audio with sensors (health and well-being applications)

### 4. Physical Characteristic

